

AMENDMENTS TO THE DRAWINGS

Filed herewith are 19 replacement sheets of Drawings.

The Examiner did not object to the drawings. The Replacement sheets are filed herewith to conform the terms used in the drawings with those used in the Replacement Specification.

REMARKS

Claims 1-30 are currently pending in the Application. Claims 1-30 are amended to clarify features recited thereby.

Formal Matters

Applicant thanks the Examiner for acknowledging the claim for foreign priority and the receipt of the priority document.

Further, Applicant thanks the Examiner for acknowledging review and consideration of the references cited in the Information Disclosure Statement filed on February 6, 2001.

However, the Examiner is respectfully requested to acknowledge review and consideration of the references cited in the Information Disclosure Statement filed on June 14, 2004.

Rejection of Claims 1-30 under 35 U.S.C. § 112, First Paragraph

Claims 1-30 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the **written description requirement**, on the ground that the Specification lacks enabling, essential subject matter presented in a clear and concise manner which would support the claims. The Examiner states that it would appear that Japanese Patent Applications 10-149383, to which the Specification refers on pages 3 and 4, recites essential subject matter which should have been including explicitly in the Specification.

Further, the Examiner rejects claims 1-30 under 35 U.S.C. § 112, first paragraph, as failing to comply with the **enablement requirement** based on the same alleged failure to incorporate essential subject matter into the Specification.

In the same vein, the Examiner objects to the Specification as failing to incorporate essential matter into the Specification.

These rejections and objections are traversed. The subject matter disclosed in Japanese Patent Application 10-149382 is not essential to describing the present invention. A person of ordinary skill in the art would have readily understood based on Applicant's disclosure alone that Applicant had intellectual possession of the claimed subject matter, and a person of ordinary skill in the art would have been enabled to make or use the invention based solely on Applicant disclosure.

Therefore, these rejections and objection should now be withdrawn.

Rejection under 35 U.S.C. § 112, First Paragraph, Based on Reference Numerals

The claims are rejected under 35 U.S.C. § 112, first paragraph, for failing to meet the written description requirement on the grounds that Figures 2, 8, 11, 13 and 16 are described using different reference numerals on pages 3 and 4 from those used on page 13. This rejection is traversed.

Pages 3 and 4 of the Specification contain reference numerals referring to a figure of Japanese Patent Application 10-149382, not to Drawings of the present invention. Therefore, this rejection should now be withdrawn.

Rejection of Claims 1-30 under 35 U.S.C. § 112, First Paragraph,

Replacement Specification Requested

Claims 1-30 are rejected under 35 U.S.C. § 112, first paragraph, on the grounds that the Specification is unclear, and Applicant is requested to file a Replacement Specification.

A Replacement Specification is filed herewith. Therefore, this rejection should now be withdrawn.

Rejection of Claims 2, 12 and 22 under 35 U.S.C. 112, Second Paragraph

Claims 2, 12 and 22 under 35 U.S.C. 112, second paragraph, on the ground that “clock timing” is unclear. This rejection is traversed.

Applicant respectfully submits that a person of ordinary skill in the art would have readily understood the term “clock timing” as recited by claims 2, 12 and 22, and, therefore, at most the ground cited as the basis for the rejection amounts to no more than a ground for an objection.

However, in the interest of expediting prosecution of the present Application claims 2, 12 and 22 are amended herewith. Therefore, this rejection should now be withdrawn.

Rejection of Claims 3, 5-9, 13, 15-19, 23, 25-29

under 35 U.S.C. § 112, Second Paragraph

Claims 3, 5-9, 13, 15-19, 23, 25-29 are rejected under 35 U.S.C. § 112, second paragraph, on the ground that “signal list” is unclear. This rejection is traversed.

The term “signal list” is clear and a person of ordinary skill in the art would have readily understood the term based solely on Applicant’s Disclosure. For instance, starting at line 15 of page 17 of the Specification, it states that “when the first statement indicates a clock boundary, all the variables stored as data signal on the signal list storing section 2 are deleted.” (see also, figure 6, S104.) Accordingly, a person of ordinary skill in the art would have readily understood that “signal list” means a list of data signal variables.

However, in the interest of expediting prosecution of the present Application, claims 3, 5-9, 13, 15-19, 23, 25-29 are amended so as further to clarify this feature. Accordingly, this rejection should now be withdrawn.

Rejection of Claims 4, 14 and 24 under 35 U.S.C. §112, Second Paragraph

Claims 4, 14 and 24 are rejected under 35 U.S.C. §112, second paragraph, on the ground that the term substitution to a variable of a non-overwrite type is carried out is unclear. This rejection is traversed.

The Specification describes that “a variable of a non-overwrite type” is defined as a variable that is not overwritten with a same timing. This means that a program code should be described by a designer such that this variable is not overwritten within the same timing. However, when the designer erroneously describes a source program code such that the variable is overwritten, this error is detected in the present invention.

A “non-overwrite” variable is different from a “write-protected” variable, which is pointed out by the Examiner. A non-overwrite variable is overwritten since the

variable is not write-protected. Thus, no claim amendment is necessary and this rejection should be withdrawn.

Rejection of Claims 1, 2, 3, 5-9, 11-13, 15-19, 21, 23 and 25-29

under 35 U.S.C. §102

Claims 1, 2, 3, 5-9, 11-13, 15-19, 21, 23 and 25-29 are rejected under 35 U.S.C. §102 as being anticipated by Miller et al. U.S. Patent No. 6,026,219. This rejection is traversed.

According to an aspect of Applicant's claimed invention, a source program that represents hardware description in a programming language is compiled and compared with a behavioral synthesis-produced module to detect a portion whose logic is different. For example, according to an aspect of Applicant's claimed invention, the source program for hardware description written in a programming language might be written in a programming language such as the C programming language, and then compiled using a software compiler.

For at least the following reasons, the cited prior art including Miller, does not anticipate or render obvious Applicant's claimed invention. For example, independent claims 1, 11 and 21 require detecting a portion of source program in a programming language whose compiled code obtained using a software compiler is different in logic from the portion's behavioral synthesis-produced module.

Miller discloses linking behavioral synthesis results with logic synthesis results to verify timing characteristics of a circuit (Miller, Abstract).

Miller does not disclose or suggest a source program for hardware description in a programming language that is compiled using a software compiler. The Examiner cites Miller, Figure 2, 1330, which refers to “logic synthesis (design compiler).” However, as explained for example at Miller, col. 8, lines 41-46, logic synthesis improves circuits by decreasing the area used by them. The design compiler thus is not used to compile code in a programming language.

Since Miller does not disclose or suggest such a source program that is compiled for hardware description, Miller is incapable of disclosing or suggesting that the difference in logic from such compiled source program with the behavioral synthesis-produced module is detected, as *inter alia*, required by independent claim 1, 11 and 21. Therefore, this rejection should now be withdrawn.

Rejection of Claims 1, 2, 3, 5-9, 11-13, 15-19, 21, 23 and 25-29

under 35 U.S.C. § 102

Claims 1, 2, 3, 5-9, 11-13, 15-19, 21, 23 and 25-29 are rejected under 35 U.S.C. § 102 as being anticipated by Gregory et al U.S. Patent No. 5,937,190. This rejection is traversed.


Gregory discloses analyzing and debugging digital circuits constructed from hardware description language source text using logical synthesis or behavioral synthesis (Gregory, col. 1, lines 15-19), that the product of the logic synthesis can then be refined by presentation thereof to the designer (Fig. 1, Gregory, Col. 7, lines 19-25).

Gregory does not disclose or suggest a source program for hardware description in a programming language that is compiled using a software compiler. Since

Gregory does not disclose or suggest such a source program that is compiled for hardware description, Gregory is incapable of disclosing or suggesting that the difference in logic from such compiled source program with the behavioral synthesis-produced module is detected, as *inter alia*, required by independent claim 1, 11 and 21. Therefore, this rejection should now be withdrawn.

For at least the reasons set forth in the foregoing discussion, Applicant believes that the Application is now allowable, and respectfully requests that the Examiner reconsider the rejections and allow the Application. Should the Examiner have any questions regarding this Amendment, or regarding the Application generally, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,


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Encl.: Replacement Specification
Replacement Sheets
Petition for Extension of Time